

S/N 09/577,805PATENTIN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas T. Hansen et al.

Examiner: Judson Jones

Serial No.: 09/577,805

Group Art Unit: 2834

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Docket: 1063.004US1

Title: HIGH POWER ULTRASONIC TRANSDUCERS

*Office - A  
REVANS  
6/29/01*PRELIMINARY AMENDMENTVIA FACSIMILE TO: 703-305-3432Commissioner for Patents  
Washington, D.C. 20231

Prior to examination of the above-referenced case, please amend the above-identified patent application as follows:

IN THE CLAIMS

Please substitute the claim set in the appendix entitled Clean Version of Pending Claims for the previously pending claim set. Specific amendments to individual claims are detailed in the following marked up set of claims.

Please amend the claims as follows:

32. (Amended) An ultrasonic transducer comprising:

a plurality of sub-motors, each containing a prestress bolt located proximate to an active element [made from a smart material], wherein the sub-motors are designed to operate simultaneously [to produce ultrasonic energy];

a [cooling] refrigeration system connected to the [transducers for cooling each active element] transducer, the [cooling] refrigeration system utilizing a phase change cooling medium designed to cool each active element; and

a [composite] master wave-guide connected to the plurality of sub-motors, the master wave-guide designed to be reactive to [the] ultrasonic energy [from] produced by the plurality of sub-motors, wherein the master wave-guide channels the ultrasonic energy to perform work on a continuous basis.